

### REMARKS

Claims 1-36 are pending in this application. Claims 10, 16, 18 and 19 have been allowed. Claims 1-9, 11-15, 17 and 20-36 stand rejected. The Applicants have reviewed the Examiner's rejections in the Office Action mailed March 24, 2004, and now respectfully traverse the Examiner's rejections. Reconsideration and allowance of the pending claims are requested for the reasons detailed below.

#### 35 U.S.C. 102(b)

The Examiner rejected claims 1-3, 5-9, 11-14, 17, 20-23, 25-27 and 30-33 under 35 U.S.C. 102(b) as being anticipated by *Micheron* (U.S. Patent No. 4,400,634). The Applicants respectfully traverse the Examiner's rejection.

#### 1. Claim 1

The Examiner asserts that *Micheron* "discloses in fig.1-3 an electroactive device comprising two layers (1,2) of material wherein one layer is an electroactive material and wherein at least one layer is of non-uniform thickness (2)." The Applicants respectfully assert that a careful reading of *Micheron* shows that neither electroactive layer (1) nor electroactive layer (2) is of non-uniform thickness.

In examining Figs. 1-3 of *Micheron*, the Applicants draw the Examiner's attention to the two electroactive layers (1) and (2) in Figs. 1 and 2 and layers (1) and (20) in Fig. 3. These layers consist of two dielectrics (1) and (2) in Figs. 1 and 2 and two dielectrics (1) and (20) in Fig. 3 made from polymer materials in sheet form. See col. 3, lines 4-6; col. 3, line 22 and line 29; and col. 3, lines 46-47. The two dielectrics are mechanically coupled by a connection ensuring the transmission of the tangential forces of dielectric 1 to dielectric 2 or 20, as applicable. See col. 3, lines 11-15 and col. 3, lines 48-50. A review of *Micheron* indicates that in no instance does the thickness of any electroactive layer vary. Fig. 1 shows the uniform thickness electroactive dielectric layers 1 and 2 separated by an electrode 5. See col. 3, line 4-18. Again, in this illustration it is clear that even if the layers 1 and 2 were of different individual thicknesses, their thickness

does not vary as a function of width or length. Figs. 2 and 3 show similar configurations of dielectric sheets and electrodes.

The Applicants respectfully submit that *Micheron* neither anticipates nor teaches the subject matter of claim 1. Claim 1 clearly states "wherein at least one layer of electroactive material is of non-uniform thickness." Because there is no such teaching in *Micheron*, the Applicants assert that claim 1 is allowable.

#### 2. Claims 2-3, 5-9, 11-14, 17, 20-23, 25-27, 30-33

Following from the Applicants assertion above that claim 1 is allowable, the Applicants assert that claims 2-3, 5-9, 11-14, 17, 20-23, 25-27 and 30-33 which depend from claim 1 are also allowable.

#### 35 U.S.C. 103

The Examiner rejected claims 4, 15, 24, 28, 29, and 34-35 under 35 U.S.C. 103(a) as being unpatentable under 35 U.S.C. 103(a) over *Micheron* in view of *Pelrine*.

The Examiner asserts, with respect to claim 4, that *Micheron* "discloses in fig. 3 an electroactive device comprising two layers of material with layer 2 of non-uniform thickness." The Examiner further states that *Micheron* inherently discloses means for bonding, but does not disclose polymer electrodes. The Examiner relies on *Pelrine* for disclosing polymer electrodes for the purpose of providing compliant electrical connections.

The Examiner's assertion that claims 4, 15, 24, 28, 29 and 34-35 are obvious relies on *Micheron*'s teaching of an electroactive device comprising an electroactive layer of non-uniform thickness. As argued above, the Applicants assert that there is no Figure or portion of specification in *Micheron* which makes such teaching. Therefore, the Applicants assert that claims 4, 15, 24, 28, 29 and 34-35 are non-obviousness over *Micheron* on view of *Pelrine*.

Additionally, the Applicants respectfully bring to the Examiner's attention several instances of reference to *Schaff* within the 35 U.S.C. 103 rejections. The Applicants' understanding, per paragraph 1 of the DETAILED ACTION, is that the Applicants' prior

arguments with respect to the rejections of claims in view of *Schafft* were considered to be persuasive and all rejections pertaining thereto were withdrawn.

### CONCLUSION

In view of the above Remarks, the Applicants submit that all pending claims in the instant application are in condition for allowance. Reconsideration and withdrawal of the objections and rejections is requested and allowance of the claims at an early date is solicited.

Respectfully submitted,

*Robin W. Edwards*

ROBIN W. EDWARDS  
Attorney of Record  
Reg. No. 39,179

June 24, 2004

757-864-9260

or

757-864-3230

NASA Langley Research Center  
Mail Stop 212  
Hampton, VA 23681-2199